# MWR

MORBIDITY AND MORTALITY WEEKLY REPORT

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# National Arthritis Month - May 1995

May is National Arthritis Month. During this month, nationwide educational activities are planned to increase awareness of arthritis. Additional information about arthritis and addresses of local chapters are available from the Arthritis Foundation, P.O. Box 7669, Atlanta, GA 30357; telephone (800) 283-7800 or (404) 872-7100.

# Prevalence and Impact of Arthritis Among Women — United States, 1989–1991

Arthritis and other rheumatic conditions are among the most prevalent chronic conditions in the United States, affecting approximately 38 million persons (1). The self-reported prevalence of arthritis is greater among women than among men, and for women aged >45 years, arthritis is the leading cause of activity limitation (1,2). This report uses data from the National Health Interview Survey (NHIS) to provide estimates of the prevalence and impact of arthritis among women aged ≥15 years during 1989–1991, compares the prevalence estimates of arthritis to other chronic conditions affecting women during 1989–1991, and projects the prevalence of arthritis among women in 2020.

## **Prevalence and Impact Estimates**

The NHIS is an annual national probability sample of the U.S. civilian, noninstitutionalized population (3). Estimates of the prevalence of arthritis were based on a one-sixth random sample of women aged ≥15 years during 1989–1991 (n=24,201 of 145,832) who answered questions about the presence of any musculoskeletal condition during the preceding 12 months and details about these conditions. Each condition was assigned a code from the *International Classification of Diseases*, *Ninth Revision*, *Clinical Modification* (ICD-9-CM). This analysis used the definition of arthritis, which included arthritis and other rheumatic conditions,\* developed by the

<sup>\*</sup>ICD-9-CM codes 95.6, 95.7, 98.5, 99.3, 136.1, 274, 277.2, 287.0, 344.6, 353.0, 354.0, 355.5, 357.1, 390, 391, 437.4, 443.0, 446, 447.6, 696.0, 710–716, 719.0, 719.2–719.9, 720–721, 725–727, 728.0–728.3, 728.6–728.9, 729.0–729.1, and 729.4.

TABLE 1. Estimated average annual prevalence of self-reported arthritis and activity limitation attributed to arthritis among women aged ≥15 years, by selected characteristics — National Health Interview Survey (NHIS). United States. 1989–1991

		Self-r	Self-reported arthritis	hritis			Self-report	Self-reported activity limitation	limitation	
			Rate*	.0				Rate*	*8	
Characteristic	No.†	Unadjusted (95% CI <sup>§</sup> )	(95% CI <sup>§</sup> )	Age- adjusted	(95% CI)	No.†	Unadjusted (95% CI)	(95% CI)	Age- adjusted	(95% CI)
Age group (yrs)										
15-24	581	3.3	(+0.6)	1	1	62	0.4	(±0.1)	1	1
25-34	1,658	7.7	(±0.7)	1	1	163	0.8	(±0.3)	1	1
35-44	2,803	14.7	(±1.1)	1	I	342	3.8	(+0.4)	1	1
45-54	3,625	27.8	(±1.6)	1	1	572	4.4	(+0.8)	1	1
55-64	4,509	40.2	(±1.9)	1	1	989	8.8	(±1.4)	1	1
65-74	5,095	50.9	(±2.1)	1	1	1,238	12.4	(+1.4)	1	-
75-84	3,433	60.7	$(\pm 2.8)$	ı	1	893	15.5	(±2.1)	1	1
285	1,051	62.0	(±4.7)	1	1	339	21.3	(±4.5)	I	
Race	19.552	23.7	(+0.7)	22.1	(+0.5)	3.795	4.6	(+0 3)	4.2	(+0 1)
Black	2,459	20.6	(±1.4)	23.4	(±1.3)	629	10.	(+0.9)	100	(+0.4)
American Indian/										
Asian/	081	22.7	(46.6)	24.5	(146.0)	42	5.7	(±2.8)	00	(±1.7)
Pacific Islander	224	8.5	(±2.8)	10.8	(+2.9)	35	1.3	(±0.7)	2.0	(±0.5)
Other	339	14.6	(±3.5)	18.6	(±4.0)	63	3.0	(±2.4)	3.9	(+0.9)
lody mass index**										
	11,379	32.7	(±1.0)	28.9	(±0.8)	2,718	7.8	(±0.3)	6.7	(±0.2)
<27.3	11,272	18.7	(±0.7)	20.5	(∓0.6)	1,866	3.1	(±0.1)	3.4	(±0.1)
Education (yrs)										
80 VI	3,965	41.3	$(\pm 2.3)$	24.8	(±1.7)	1,216	12.7	(±1.6)	6.8	(±0.4)
9-11	3,474	23.0	(±1.5)	24.4	(±1.4)	866	5.6	(+0.8)	5.8	(±0.3)
12	8,406	21.7	(±1.1)	20.9	(±0.9)	1,489	3.9	(±0.5)	3.8	(±0.2)
13-15	3,781	19.3	(±1.2)	22.5	(±1.1)	595	3.0	(±0.5)	3.8	(±0.3)
16	1,635	16.9	(±1.5)	19.4	(±1.6)	238	2.4	(±0.7)	3.1	(±0.3)
217	1,276	20.6	(±2.1)	22.0	(±2.1)	152	2.4	(∓0.8)	3.0	(±0.4)
Unknown	219	19.4	(±9.1)	15.7	$(\pm 4.8)$	40	9.0	(±2.3)	2.6	(#0.8)

Annual household										
<\$10,000	3,866	32.8	(±2.1)	28.3	(±1.7)	1.221	10.3	(±1.2)	8.7	(+0.4)
\$10,000-\$19,999	4,730	27.9	(±1.6)	25.0	(±1.3)	1,064	6.4	(±0.9)	5.3	(+0.3)
\$20,000-\$34,999	4,224	19.9	(±1.1)	21.0	(±1.1)	697	9.3	(±0.5)	3.6	(±0.2)
\$35,000-\$49,999	2,445	16.7	(±1.4)	19.8	(±1.3)	321	2.2	(±0.5)	3.1	(±0.3)
>\$50,000	2,931	17.0	(±1.2)	20.2	(±1.4)	343	1.9	(±0.4)	2.7	(±0.3)
Unknown	4,559	25.1	(±1.4)	19.1	(±1.1)	952	5.3	(±0.8)	3.8	(±0.2)
Total	22,755	22.7	(∓0.6)	21.9	(±0.5)	4,597	4.6	(±0.3)	4.4	(±0.1)

listed age categories to adjust to the same population.

In thousands. To generate national estimates, NHIS rates were applied to the U.S. civilian, noninstitutionalized population for age, confidence interval. \*Average annual rate in percentages in the 1989-1991 U.S. civilian, noninstitutionalized population. Age-adjusted rates use the eight

Includes persons of unknown or multiple races.
\*\*Calculated for women aged ≥18 years only.

National Arthritis Data Workgroup (1). These data were weighted to provide average annual prevalence estimates.

Arthritis impact, defined as activity limitation caused by arthritis, was estimated using all women aged ≥15 years participating in NHIS. Respondents were asked whether they were limited in working, housekeeping, or performing other activities as a result of health condition(s) and the condition(s) they considered to be responsible for these activity limitations. Data from women who attributed their activity limitation to arthritis were weighted to provide average annual prevalence estimates of the impact of arthritis among women aged ≥15 years during 1989–1991.

An estimated 22.8 million (22.7%) women self-reported arthritis during 1989–1991 (Table 1). The prevalence of self-reported arthritis increased directly with age and was 8.6% for women aged 15–44 years, 33.5% for women aged 45–64 years, and 55.8% for women aged ≥65 years. Rates were higher for women who were overweight (body mass index [BMI] ≥27.3 [28.9%]), had ≤11 years of education (30.0%), and resided in households with an annual income <\$20,000 (29.9%).

An estimated 4.6 million (4.6%) women reported arthritis as a major or contributing cause of activity limitation during 1989–1991 (Table 1). Activity limitation associated with arthritis increased directly with age and was 1.0% for women aged 15–44 years, 6.4% for women aged 45–64 years, and 14.2% for women aged ≥65 years. Ageadjusted rates of activity limitation were higher for blacks (6.5%) and American Indians/Alaskan Natives (6.9%) than for whites (4.2%). Age-adjusted rates of activity limitation for women who were overweight were nearly twofold greater than for those who were not, and nearly threefold greater for women who resided in a household with an annual income <\$10,000 per year than for those who resided in a household with an annual income ≥\$35,000.

# **Comparison With Other Chronic Conditions Affecting Women**

Average annual prevalence estimates of other chronic conditions affecting women were based on a one-sixth random sample of women who answered questions, on separate condition lists, regarding the presence of impairments; respiratory conditions; circulatory conditions; and selected conditions of the genitourinary, endocrine, and nervous systems. These data were weighted to provide average annual prevalence estimates of other chronic conditions among women aged ≥15 years during 1989–1991. Average annual prevalence estimates of activity limitation caused by these chronic conditions were determined as they were for arthritis.

Arthritis was the most common self-reported chronic condition affecting women (Table 2), ranking ahead of self-reported hypertension (8.1 million), ischemic heart disease (3.7 million), and other chronic conditions, including breast cancer and malignancy of the female reproductive tract (e.g., ovarian, endometrial, and cervical cancer). Among the conditions reported responsible for activity limitations, women most frequently mentioned arthritis (4.6 million), followed by orthopedic deformity (3.0 million) and ischemic heart disease (1.3 million).

### **Projections for 2020**

Arthritis among women aged ≥15 years was projected to 2020 by applying the average annual arthritis prevalence rate for 1989–1991, stratified by age and race to the relevant U.S. population projected by the Bureau of the Census (4).

TABLE 2. Estimated average annual prevalence of self-reported chronic conditions and activity limitations among women aged ≥15 years, by condition — National Health Interview Survey (NHIS), United States, 1989–1991

Condition	Overall no.*	No. with activity limitation*
Arthritis	22,755	4,597
Orthopedic deformity	8,365	3,025
Chronic sinusitis	8,323	21
Hypertension	8,061	677
"Hay fever," rhinitis	6,438	71
Ischemic heart disease	3,694	1,270
Hearing impairment	3,322	238
Other selected conditions <sup>†</sup>	4,286	1,220

<sup>\*</sup>In thousands. To generate national estimates, NHIS rates were applied to the U.S. civilian, noninstitutionalized population.

From 1989–1991 to 2020, the prevalence of self-reported arthritis among women aged ≥15 years is projected to increase from 22.8 million (22.7%) to 35.9 million (26.7%).

Reported by: Statistics Br, and Aging Studies Br, Div of Chronic Disease Control and Community Intervention, National Center for Chronic Disease Prevention and Health Promotion, CDC.

Editorial Note: The findings in this report indicate that during 1989–1991, arthritis was the most common self-reported chronic condition and cause of activity limitation among women aged ≥15 years. By 2020, an estimated 36 million women may be affected by arthritis—primarily reflecting the increasing average age of the U.S. population.

The analysis in this report also documents higher prevalences of self-reported arthritis and related activity limitation among older women, overweight women, and women with lower income and education levels. Older age and overweight are commonly recognized risk factors for arthritis. The cross-sectional analysis in this report precluded determination of whether overweight precedes or results from arthritis; however, overweight has been established as a risk factor for osteoarthritis of the knee (5). In addition, low socioeconomic status, for which income and education may be markers, has been associated with increased prevalence, mortality, and disability among persons with arthritis and other rheumatic conditions (6,7). Although prevalence rates for self-reported arthritis among blacks and American Indians/Alaskan Natives were similar to those among whites, activity limitation was more prevalent among both of these groups. Reasons for the increased activity limitation among blacks and American Indians/Alaskan Natives have not been determined but might reflect sociocultural differences or access to health care.

Diseases considered to have particularly important public health ramifications for women include those that affect only women (e.g., endometrial, ovarian, and cervical cancers); are more prevalent among women (e.g., breast cancer and osteoporosis); are more prevalent overall (e.g., hypertension, diabetes, and cardiovascular disease); have different risk factors for women (e.g., menopause and cardiovascular disease or

<sup>&</sup>lt;sup>†</sup>Diabetes, thyroid disorder, bladder disorder, cerebrovascular disease, breast neoplasm, and female reproductive malignancy.

smoking and pregnancy); or require different interventions for women (e.g., infertility) (8). Although the prevalence of arthritis is approximately 60% greater among women than men (1), the public health importance of arthritis among women has not been emphasized previously.

The NHIS data enables a more accurate estimate of the prevalence and impact of arthritis than alternative data sources (e.g., Medicare, health maintenance organization databases, and hospital discharge data) because many persons with arthritis do not visit physicians for their condition. However, these self-reported conditions and the ICD-9-CM codes assigned to them have not been validated.

In addition to limitations in understanding the epidemiology of self-reported arthritis among women, the relation of arthritis to other chronic conditions among women has not been well characterized. To assist in reducing the public health impact of arthritis among women, priorities in the assessment of this problem include determining frequencies of the different types of arthritis and their natural histories among women, estimating more accurately the economic and societal burden of this condition in women, and evaluating the effectiveness of interventions, including supervised exercise programs, weight loss, and self-education courses (5,9,10). Additional strategies public health agencies and health-care providers can consider to reduce the impact of arthritis among women include 1) promoting primary prevention of arthritis through weight reduction and prevention of sports- or occupational-related joint injury and 2) encouraging early detection and appropriate management of women with arthritis through use of medical and physical therapy, exercise, and established educational programs such as the Arthritis Self-Management Course (9,10).

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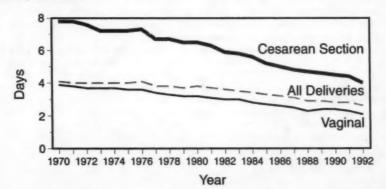
# Trends in Length of Stay for Hospital Deliveries — United States, 1970–1992

Obstetric delivery is the most frequent cause of hospital admission in the United States, reflecting the approximately 4 million births in this country each year (1). Because of steadily increasing hospital costs, overall lengths of hospital stay have declined. To assess national trends in length of stay for hospital deliveries, data were analyzed from CDC's National Hospital Discharge Survey (NHDS) from 1970 through 1992, by method of delivery. This report summarizes the results of the analysis.

Since 1965, the NHDS has collected data from U.S. nonfederal, short-stay hospitals. Each year, approximately 200,000 inpatient records are selected from approximately 400 hospitals; data are weighted to represent all hospitalizations nationally (2,3). Selected patient information (e.g., medical diagnoses and surgical procedures) is abstracted from each record. For this analysis, the NHDS provided information about mother's age and race/ethnicity; method of payment; and the hospital's ownership, size, and location. Estimates for average length of stay were derived from the 20,000–33,000 deliveries each year among all records sampled. Hospital stays of <24 hours were recorded as 0 days; these hospitalizations accounted for <1% of all deliveries and were relatively constant by year (i.e., 0.3% in 1970 to 0.7% in 1992). The proportion of all deliveries that occurred outside of hospitals also was stable from 1975 (0.9%) to 1990 (1.1%) (4).

In 1970, the average length of stay for all hospital deliveries was 4.1 days (median: 4 days). By 1992, the average had decreased by 37% to 2.6 days (median: 2.0 days). The average length of stay for women who gave birth vaginally decreased by 46% (from 3.9 to 2.1 days) and for those who gave birth by cesarean section by 49% (from 7.8 to 4.0 days) (Figure 1). The decrease in the average length of stay for all deliveries was smaller than that for either method because the percentage of deliveries by cesarean section increased from 5.5% to 23.5% during this period (5).

FIGURE 1. Average length of stay for hospital deliveries, by delivery method — United States, 1970–1992



Hospital Deliveries — Continued

The average length of stay also was analyzed by mother's age (<20, 20–29, 30–39, and >39 years), race (white or black)\*, hospital location (Northeast, Midwest, South, or West regions), hospital ownership (proprietary, government, or nonprofit), and hospital size (<100, 100–299, 300–499, and >499 beds). From 1970 through 1992, the average length of stay decreased similarly for all these groups; decreases ranged from 39% to 52% for vaginal deliveries and from 38% to 53% for cesarean deliveries. NHDS began collecting information about method of payment (i.e., Blue Cross/Blue Shield<sup>†</sup>, other private insurance, Medicaid, and self-paying) in 1977. From 1977 through 1992, the average length of stay decreased for these payment groups; decreases ranged from 35% to 38% for vaginal deliveries and from 32% to 47% for cesarean deliveries.

Reported by: Div of Reproductive Health, National Center for Chronic Disease Prevention and Health Promotion; Prevention Effectiveness Activity, Epidemiology Program Office, CDC.

Editorial Note: The length of stay associated with hospital deliveries steadily decreased during 1970–1992. Early hospital discharge results in reduced health-care costs and enables mothers to return home sooner with their newborns. However, careful postpartum follow-up is necessary to ensure prompt diagnosis and treatment of any maternal or neonatal complications. Early discharge should not preclude efforts traditionally conducted during postpartum hospitalization to educate women about breastfeeding, family planning, care of their newborn, and other topics important for new mothers.

The optimal length of stay for uncomplicated deliveries reflects several factors, including the presence of others in the home who can support the mother after discharge, the mother's awareness of complications, and access to health-care services. Guidelines published by the American Academy of Pediatrics and the American College of Obstetricians and Gynecologists suggest that, when there have been no complications, the duration of postpartum hospital stays range from an average of 48 hours for vaginal delivery to an average of 96 hours for cesarean birth (excluding the day of delivery) (6). In addition, specific criteria should be met for a woman to be discharged early, especially within 24 hours of delivery.

One potential limitation of the analysis in this report is that data from the NHDS on length of stay does not distinguish the postpartum period from the rest of the hospitalization. Therefore, this analysis could not determine whether the decrease in the average length of stay resulted from a shorter antepartum stay or postpartum stay. However, since 1970, most of the efforts to decrease length of stay for hospital deliveries has been directed toward the postpartum period.

Since 1970, the rate of health-care costs has increased more rapidly than that of general inflation; efforts to decrease hospital health-care costs by reducing length of stay will probably intensify. Most studies have not detected an increased rate of morbidity in association with early postpartum discharge (7–9). However, these studies—which were conducted among carefully selected women at low risk for postpartum complications—documented rates of complications of up to 14% among women and 11% among their infants (7). In addition, home visits by nurse practitioners after discharge (a practice not routinely used by health-care providers) ensured

\*Numbers from other racial/ethnic groups were too small for reliable analysis.

<sup>&</sup>lt;sup>†</sup>Use of trade names and commercial sources is for identification only and does not imply endorsement by the Public Health Service or the U.S. Department of Health and Human Services.

# Hospital Deliveries — Continued

prompt diagnosis and treatment of postpartum complications. These findings underscore the need to ensure adequate follow-up care for women and infants and to maintain the educational activities traditionally provided during postpartum hospitalization. The prevalence of complications also should be monitored to accurately determine the costs and benefits of early postpartum discharge.

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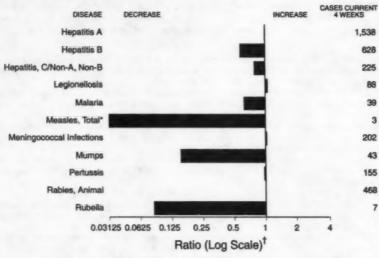
# Deaths from Melanoma — United States, 1973-1992

Approximately three fourths of all skin cancer-associated deaths are caused by melanoma. During 1973–1991, the incidence of melanoma increased approximately 4% each year (1). In addition, the incidence of melanoma is increasing faster than that of any other cancer (2). To characterize the distribution of deaths from melanoma in the United States, CDC analyzed national mortality data for 1973 through 1992. This report summarizes the results of that analysis.

Decedents for whom the underlying cause of death was melanoma (International Classification of Diseases, Adapted, Ninth Revision, codes 172.0–172.9) were identified from public-use, mortality data tapes from 1973 through 1992 (3). The denominators for rate calculations were derived from U.S. census population estimates (4,5). Rates were directly standardized to the age distribution of the 1970 U.S. population and were analyzed by state, age group, sex, year, and race. To increase the precision of the rates presented, race was characterized as white and all other races because approximately 98% of deaths from melanoma occurred among whites.

From 1973 through 1992, the overall percentage increase in the rate of deaths from melanoma (34.1%) was the third highest of all cancers; for males, the percentage

FIGURE I. Notifiable disease reports, comparison of 4-week totals ending April 29, 1995, with historical data - United States



Beyond Historical Limits

\*The large apparent decrease in the number of reported cases of measles (total) reflects dramatic fluctuations in the historical baseline.

Ratio of current 4-week total to mean of 15 4-week totals (from previous, comparable, and subsequent 4-week periods for the past 5 years). The point where the hatched area begins is based on the mean and two standard deviations of these 4-week totals.

TABLE I. Summary — cases of specified notifiable diseases, United States, cumulative, week ending April 29, 1995 (17th Week)

	Cum. 1995		Cum. 1995
Anthrax		Psittacosis	16
Brucellosis	14	Rabies, human	1 1
Cholera	1	Rocky Mountain Spotted Fever	34
Congenital rubella syndrome	3	Syphilis, congenital, age < 1 year <sup>†</sup>	
Diphtheria		Tetanus	8
Heemoohilus influenzee*	450	Toxic shock syndrome	63
Hansen Disease	40	Trichinosis	18
Plague		Typhoid fever	82
Poliomyelitis, Paralytic		-,,	

Of 437 cases of known age, 105 (24%) were reported among children less than 5 years of age.

\*Updated quarterly from reports to the Division of Sexually Transmitted Diseases and HIV Prevention, National Center for Prevention Services. First quarter data not yet available.

-: no reported cases

TABLE II. Cases of selected notifiable diseases, United States, weeks ending April 29, 1995, and April 30, 1994 (17th Week)

						Hepatitis (	Viral), by	type			
Reporting Area	AIDS*	Gonon	thea	A		8		C/NA	NB	Legion	ellosis
	Cum. 1995	Cum. 1995	Cum. 1994	Cum. 1995	Cum. 1994	Cum. 1995	Cum. 1994	Cum. 1995	Cum. 1994	Cum. 1995	Cum. 1994
UNITED STATES	19,652	117,266	126,300	7,792	6,934	2,809	3,972	1,290	1,432	410	472
NEW ENGLAND	842	1,771	2,656	56	105	62	137	31	48	5	5
Maine	23	23	21	11	11	2	4				
N.H. ∕t.	38	36 15	24	2	3	7	8	3	5		
Mass.	457	978	975	20	47	19	94	27	27	4	1
R.I.	59	178	143	9	12	7	3	1	10	1	4
Conn.	258	541	1,484	14	32	26	24	-	-	N	N
MID. ATLANTIC	4,550	12,412	15,194	371	479	293	460	110	177	44	55
Upstate N.Y. N.Y. City	521 2.342	2,640 3,932	3,431 5,850	107 155	167	105 83	123 97	61	79	11	14
N.J.	1,112	1,181	1,769	54	109	73	127	37	84	7	10
Pa.	575	4,059	4,144	55	47	52	113	11	13	26	31
E.N. CENTRAL	1,622	25,462	23,008	1,052	642	298	472	86	131	107	167
Ohio	409	8,137	7,882	688	179	33	65	4	4	54	63
linet.	106 737	2,350 7,151	2,545 4,817	50 138	116 200	69 54	77 116	15	38	7	53 10
Mich.	278	6.442	5,528	129	86	132	123	67	88	14	28
Wis.	92	1,382	2,236	47	61	10	91		*	8	13
W.N. CENTRAL	427	6,193	6,888	364	318	180	211	32	24	42	32
Minn. Iowa	93 20	951 516	1,068 437	39 21	61	13	18	3	5	8	20
Mo.	148	3.692	3,692	246	156	128	158	20	4	27	6
N. Dak.	1	10	10	10	1	2				3	2
S. Dak. Netzr.	43	65	61 332	6	14	1 8	12	1 3	4	2	3
Kans.	121	959	1,288	33	36	15	12	4	5	2	1
S. ATLANTIC	5,708	34,417	32,736	363	414	422	876	97	276	84	121
Del.	113	660	597	5	12	2	3	1	1		
Md. D.C.	978 373	4,257 1,636	6,174 2,137	69	55	79	118	3	13	13	28
Va.	374	3,566	4,167	65	39	31	33	2	15	3	2
W. Va.	21	223	228	10	3	21	9	20	10	3	1
N.C. S.C.	248 280	8,009 3,751	7,994 3,984	43 11	35 11	106	101	23	24	11	8
Ga.	594	5,645	J,364	37	21	41	367	10	145	8	62
Fia.	2,727	6,670	7,465	111	229	114	215	36	67	9	18
E.S. CENTRAL	612	16,421	11,082	404	144	229	410	375	281	8	21
Ky.	63	2,832	1,436	13	75	21	36 348	6	269	1	13
Tenn. Ala.	269 159	4,133 6,485	4,358 5,288	323 44	49 20	167	24	367	3	4 2	5
Miss.	121	2,991	U	24	U		U		Ü	1	U
W.S. CENTRAL	1,404	10,983	14,130	835	881	390	306	105	113	3	11
Ark.	64	1,347	2,258	57	38	6	43	43	3	1	4
La. Okia.	299 84	3,945	4,142 1,361	27 150	32 75	53 121	116	113	27 80	2	7
Tex.	957	5,022	6,369	601	738	210	198	8	23		
MOUNTAIN	637	2,625	9,365	1,439	1,361	242	190	158	130	87	31
Mont.	8	30 44	29	19	10	7 28	6 29	19	39	2	10
Idaho Wyo.	17	18	27 32	149	116	6	6	65	31	2	1
Colo.	214	1,002	1,081	186	154	46	36	28	21	26	4
N. Mex.	69	285	332	263	349 509	80	66 18	17	20	43	1
Ariz. Utah	133	995 39	7,198	398	133	24	11	3	9	2	-
Nev.	155	212	557	48	74	10	18	5	4	9	13
PACIFIC	3,850	6,982	11,241	2,918	2,600	693	850	236	252	50	21
Wash.	360	842	986	189	383	53	81	67	83	3	7
Oreg. Calif.	122 3,261	18 5,636	328 9,410	518 2.138	2,003	32 599	23 720	12 147	164	42	20
Alaska	29	278	283	15	75	4	6	1	-		
Hawaii	78	208	234	58	14	5	20	9	3	5	2
Guam		23	46	.1	3	200	400	101	-	*	
P.R. V.I.	649 14	180	176	16	25	229	123	164	47		
Amer. Samoa		8	12	5	4					-	
C.N.M.I.		4	19	7	2	1		*			

N: Not notifiable U: Unavailable -: no reported cases C.N.M.I.: Commonwealth of Northern Marisna Islands
\*Updated monthly to the Division of HIV/AIDS, National Center for Infectious Diseases; last update March 30, 1995.

TABLE II. (Cont'd.) Cases of selected notifiable diseases, United States, weeks ending April 29, 1995, and April 30, 1994 (17th Week)

							Measle	es (Rube	ola)		Manine			
Reporting Area	Lyn	ne ese	Male	eria	Indig	enous	impo	rtsd*	To	tal	Infec	pococcal rtions	Mur	nps
	Cum. 1985	Cum. 1994	Cum. 1995	Cum. 1994	1995	Cum. 1985	1995	Cum. 1995	Cum. 1995	Cum. 1994	Cum. 1995	Cum. 1994	Cum. 1995	Cum. 1994
JNITED STATES	1,189	1,309	267	324		142	1	5	147	345	1,108	1,099	253	495
NEW ENGLAND	111	141	15	23	-	2	-	1	3	11	64	52	3	10
Asine	1		1	1							3	10	2	3
1.H. /r.	8	5	1	3			•			1	13	4	*	4
Viass.	37	23	4	8				1	1	2	22	21		
R.I.	10	17	2	4		2			2	5				1
Conn.	54	95	7	6			-			3	20	16	1	2
MID. ATLANTIC	869	933	56	50		1			1	129	110	109	32	45
Upstate N.Y. N.Y. City	497	764	12	15 12	-	i	-		1	7	42 10	38 15	10	10
N.J.	78	107	13	14	-					119	22	26	-	9
Pa.	293	61	8	9	-				*	2	38	30	18	26
E.N. CENTRAL	16	13	20	40			-			24	141	175	38	130
Ohio	13	6	1	5					-	10	45	41	16	19
Ind.	2	5	14	9	*					7	25 40	36 59	5	5 82
Mich.	i	1	2	15			:			3	27	17	16	21
Wis.			î	1	*			-	-	3	4	22		3
W.N. CENTRAL	18	27	7	17		1			1	43	67	77	17	22
Mino.	-	7	3	4		-			-		13	7	2	4
lowa Mo.	1	1	3	3 7		i			i	42	13 23	6 40	10	12
Mo. N. Dak.	4	16	3	,	-		-	-	1	42	23	40	10	12
S. Dak.											3	6		
Nebr.		-	1	2	U		U			1	6	7	2	1
Kens.	13	3		1		-					9	11	*	
S. ATLANTIC	125	146	66	69						4	204	171	35	78
Del. Md.	89	14 48	19	29	*		*	*		-	12	10		20
D.C.	ou.	1	6	7				-			1	1		20
Va.	3	13	11	8	*		-	-	-	1	26	25	10	18
W. Va.	7	3	:	-							3	8		3
N.C. S.C.	9 5	19	0	2 2						-	37 26	30	16	23
Ga.	4	44	10	10	-		-				53	33		3
Fin.	1	4	13	9	-					3	44	56	6	4
E.S. CENTRAL	7	10	8	7						28	63	69	13	
Ky.	1	7		2							25	15		
Tenn. Ale.	3	2	1	4				-		28	9	20 34	4 3	
Miss.	2	Ü	5	Ü						Ü	13	U	6	L
W.S. CENTRAL	22	18	6	7		2			2	11	139	129	12	107
Ark.	1	10	2		-	2			2		12	21	1	101
La.	*	-	1		*					1	20	20	3	1
Okta.	12	10		5		-	-			10	13 94	10 78	8	7
Tex.	9	8			-	-					-			
MOUNTAIN Mont.	2	1	21	12		40	1	1	41	85	91	83	15	12
Idaho		1		2		1	-		1		3	12	2	4
Wyo.				*		-					5	2		
Colo.	1		11	4		26				15	20			
N. Mex. Ariz.			3	2		10			28		20 33			,
Utah			1	3		*	1	1	1	70	2	14	1	
Nev.	1		1			1			1		6			
PACIFIC	19	20				96		3			229			9
Wash.	:		. 8			13		1		-	35			
Oreg.	18	20	52		U	82	U	1	83	9	150			7
Alaska	10	20	. 1			-					1		8	
Hawaii				8		-		1	1	1	2	5		
Guam					U		U			155	1		. 2	
P.R.	a					3			- 3	22	12	5		
V.I. Amer. Semoa					Ü		Ü						1	
C.N.M.I.				1			Ü			28				

<sup>\*</sup>For imported measles, cases include only those resulting from importation from other countries.

TABLE II. (Cont'd.) Cases of selected notifiable diseases, United States, weeks ending April 29, 1995, and April 30, 1994 (17th Week)

Reporting Area		Pertussis			Rubella		Sypt (Prima Secon	nilis ery & dary)	Tubercu	dosis	Rab	
	1995	Cum. 1995	Cum. 1994	1995	Cum. 1995	Cum. 1994	Cum. 1995	Cum. 1994	Cum. 1995	Cum. 1994	Cum. 1995	Cum. 1994
UNITED STATES	58	959	1,164		24	139	5,301	6,162	5,118	5,769	2,048	2,315
NEW ENGLAND	6	117	132		2	96	87	63	105	112	596	617
Maine	1	13	2				2	1				-
N.H.	2	8	31		1		1	1	4	6	73	72
/t.	2	2	14	*		00			1		79	60
Mass. R.I.	3	88	76 2	-	1	96	24	19	57 13	51 11	230 81	237
Conn.		6	7			-	39	37	30	44	133	243
MID. ATLANTIC	1	67	225		2	4	319	470	1,067	1,080	515	550
Jpstate N.Y.	1	45	88		1	4	24	63	94	168	216	389
N.Y. City		10	38	-	1		170	237	594	628		
V.J.			9			*	67	78	203	201	110	114
Pa.	-	12	90	*	*		58	92	176	83	189	47
E.N. CENTRAL	2	74	262	*		11	919	826	560	609	2	11
Ohio		33	59	*	*		320	344	91	80	1	
inst.	*	5	31 90			6	77	85 186	21 315	58	i	1
III. Mich.	2	31	20			5	362 111	112	115	326 130	1	3
Win.		1	62				49	99	18	15		3
W.N. CENTRAL		52	41				340	431	184	139	91	59
Minn.		22	16				15	16	31	29	2	5
lowa		1	3				106	16	26	10	32	23
Mo.	*	5	11			*	210	369	68	68	12	
N. Dak.		5	2	*				-	. 1	2	9	1
S. Dak.		8	-			*			16	9	15	8
Nebr. Kans.	U	10	3 6	U	-	-	9	5 25	6 36	19	21	15
S. ATLANTIC Del.	13	99	134		4	5	1,234	1,836	944	793	613	627
Md.		7	47	-			24	88	152	105	143	200
D.C.		2	3				44	80	31	40	5	200
Va.	-	7	13	-			236	220	29	119	123	133
W. Va.	-		2				1	7	29	28	31	24
N.C.	*	49	39	*	*		385	611	80	130	142	62
S.C. Ga.		11	8				245 153	228 290	102 223	134 228	46 100	59
Fla.	13	17	15		4	5	139	305	298	226	13	131
E.S. CENTRAL			34		-					252		
Ky.	4	21	15				1,475	644 83	361 54	353 98	62	61
Tenn.		2	13		-		311	327	117	129	11	3
Ala.	4	19	6	-			210	234	125	126	44	3
Miss.	-	*	U			U	808	U	65	U	*	- 1
W.S. CENTRAL		33	32		1	7	768	1,354	511	663	35	24
Ark.			1				177	188	69	75	11	1
La.		1	4				374	616	-	-	9	3
Okla.	*	3	20			4	21	51	1	70	15	1
Tex.		29	7		1	3	196	499	441	518		19
MOUNTAIN	29	371	93	*	3	1	84	233	192	149	33	3
Mont. Idaho	6	3 66	21				3	1	3 6	5	14	
Wyo.	0	00	21	-			2	1	1	1	9	
Colo.		1	50				53	55	4	13		
N. Mex.		16	5	-			1	5	22	26		
Ariz.	20	277	10		3		14	153	87	67	9	2
Utah	3	5	5		-	1	7	5	10	22	-	
Nev.		3						14	59	37	1	
PACIFIC	3	125	211		12	15	95	305	1,194	1,871	101	9
Wash.		23	30 23		1	*	6	15	84	72 43	*	
Oreg. Calif.	U	6 89	154	U	1 9		88	3 285	1,027	1,664	97	7
Alaska		09	104		9	14	1	200	24	25	4	2
Hawaii	3	7	4	-	1	1		1	56	67		
Guam	U			U		1	1	1	4	18		
P.R.	1	5	3				98	110	23	71	17	2
V.I.			-				1	17				
Amer. Samoa	U		1	U			-		2	2		
C.N.M.I.	U	*		U				1	4	14		

U: Unevailable -: no reported cases

# TABLE III. Deaths in 121 U.S. cities,\* week ending April 29, 1995 (17th Week)

		All	Caus	es, By	Age (V	ears)		PB/		-	All Cau	ses, By	Age [Y	ears)		PBI
Reporting Area	All Ages	1	265	15-64	25-44	1-24	<1	Total	Reporting Area	All Ages	265	45-64	25-44	1-24	<1	Tota
NEW ENGLAND	606		433	97	44	20	12	45	S. ATLANTIC	1,362	901	247	146	37	30	72
loston, Mass.	140		88	25	16	6	5	3 4	Atlanta, Ga.	160	101	35	15	6	3	4
Bridgeport, Conn.	4		34	5	2	3		4.1	Baltimore, Md.	184	109	38	31	5	1	18
ambridge, Mass.	17		14	2	1	1		2	Charlotte, N.C.	162	107	27	20	3	5	
all River, Mass. lartford, Conn.	33		28 26	14	2	3	-	-	Jacksonville, Fla. Miami, Fla.	137	102	23	18	4 2	2	1
owell, Mass.	2		19	2	2	-		2 3	Norfolk, Va.	63	43	8	5	5	2 2 2	-
ynn, Mass.	11		11	3	1			-	Richmond, Va.	67	52	10	4		î	
lew Bedford, Mas			21	5	3			2	Savannah, Ga.	47	32	8	5	1	1	1
lew Haven, Conn.	43		26	7	6	2	2	5	St. Petersburg, Fla.	68	44	10	9	2	3	
rovidence, R.I.	0		50	9	3	1	3	3	Tampe, Fla.	231	176	30	17	4	3	1
omerville, Mass.			5	1	2	2	*	7	Washington, D.C.	149	84	37	16	5	7	
pringfield, Mass.	4		36 20	9	3	2	1	4	Wilmington, Del.	6	6					
Waterbury, Conn. Worcester, Mass.	8		55	7	3	2	1	10	E.S. CENTRAL	856	545	166	62	29	25	5
									Birmingham, Ala.	122	76	22	10	5	6	
MID. ATLANTIC	2,13		1,307	393	257	45	38	90	Chattanooga, Tenn.	73	48	19	5	-	1	
Albany, N.Y. Allentown, Pa.	3		36 26	6	2	1	1	4	Knoxville, Tenn. Lexington, Ky.	109 74	83 56	15	4	3	- 1	1
Buffalo, N.Y.	9		78	14		1	1	2	Memphis, Tenn.	195	120	41	20	11	3	1
Camden, N.J.	2		17	1	2	3	2	3	Mobile, Ala.	77	25	14	3	2	7	
Elizabeth, N.J.	2	7	20	3	- 4			1	Montgomery, Ala.	47	37	8	1	1		
Erie, Pa.5	4		38	6	3			3	Nashville, Tenn.	159	100	37	12	4	6	
Jersey City, N.J.	4		25	9	-7	-	1		W.S. CENTRAL	1,441	908	274	176	51	32	8
New York City, N.Y			822	264	197	28	20	33	Austin, Tex.	70	39	14	10	6	1	
Newark, N.J.	7 2		32	19	18	5 2	2	8 2	Baton Rouge, La.	45	32	8	4	-	1	
Paterson, N.J. Philadelphia, Pa.	i		ű	ű	ü	ű	ű	ΰ	Corpus Christi, Tex.		30	9	6	4		
Pittsburgh, Pa.1	5		39	9	2	2	2	4	Dallas, Tex.	210	137	37	25	8	3	
Reading, Pa.	1		8	1	1	1		1	El Paso, Tex.	79	57	12	10		-	
Rochester, N.Y.	13		108	16	4	1	2	11	Ft. Worth, Tex.	112	71 216	17 83	18	10	2	2
Schenectady, N.Y.	2		24	1			-	1	Houston, Tex. Little Rock, Ark.	382 89	54	19	58	6	15	4
Scranton, Pa.5	3		27 60	18	4		4	10	New Orleans, La.	59	32	16	8	2	1	
Syracuse, N.Y. Trenton, N.J.	3		17	6	7	i	1	4	San Antonio, Tex.	177	123		14	7	5	1
Utica, N.Y.		8	11	6	1			- 1	Shreveport, La.	59	36	13	6	1	1	
Yonkers, N.Y.		Ü	U	Ü	Ü	U	U	Ú	Tulsa, Okia.	110	. 79	18	10	3		
E.N. CENTRAL	2.33	5	1,503	416	247	114	52	147	MOUNTAIN	889			69	17	22	- 6
Akron, Ohio	6		46	8	9			1	Albuquerque, N.M.	96			10		2	
Canton, Ohio	5		39	10	1		1	5	Colo. Springs, Colo	. 46			3	7	1	1
Chicago, III.	50		220	92	101	77	16	20	Denver, Colo. Las Vegas, Nev.	115			13	1	6 2	
Cincinnati, Ohio	20		146	34	17	6	1	22	Ogden, Utah	23			13		2	1
Cleveland, Ohio	13		89	26	14	3	5	3	Phoenix, Ariz.	212			16	4	7	
Columbus, Ohio Dayton, Ohio	17		124	33	16	1	1 2	15	Pueblo, Colo.	26		3				
Detroit, Mich.	23		129	55	28	8	8	11	Sait Lake City, Utah	90			10	1	5	1
Evansville, Ind.		9	28	7	4	-		1	Tucson, Ariz.	135	90	21	11	4	1	
Fort Wayne, Ind.		5	42	10	3		-	4	PACIFIC	1,867	1,314	302	172	40	21	18
Gary, Ind.	. 1	2	6	2	4				Berkeley, Calif.	23					1	
Grand Rapids, Mic		3	27	3	2	1	9	4	Fresno, Calif.	85			7	2	1	
Indianapolis, Ind. Madison, Wis.	19	9	126	36 12	17	10	9	12	Glendale, Calif.	21			1			
Milwauken, Win.	13		101	19	10	2 2	2	9	Honolulu, Hawaii	83			6	2		
Peoria, III.		2	27	3	1	-	1	5	Long Beach, Calif. Los Angeles, Calif.	410		13	52	13	2	
Rockford, III.		19	36	10			1	3	Pasadena, Calif.	23			3	1.3		
South Bend, Ind.		18	48	11	5	2	2	7	Portland, Oreg.	82			4	1	-	
Toledo, Ohio		10	70	14		2	1	4	Sacramento, Calif.	185	139	29	11	5	1	
Youngstown, Ohio		14	50	9	-	-	2		San Diego, Calif.	145			18	1	2	
W.N. CENTRAL	63		453	102		16	14		San Francisco, Cali				19	1	6	
Des Moines, lowe		U	U	U		U	U		San Jose, Calif. Santa Cruz, Calif.	220				6	6	1
Duluth, Minn.		18	22	1	4	.:	.1	4	Seattle, Wash.	132				6	3	
Kansas City, Kans Kansas City, Mo.		U	64	17		U	U		Spokene, Wash.	62				1	2	
Lincoln, Nebr.		19	32			2		5	Tacoma, Wash.	115				1	2	
Minneapolis, Min		17	140		12	4	3							200		
Omaha, Nebr.		88	59			2	4	8	TOTAL	12,114	- 9,08	2 2,149	1,205	369	246	
St. Louis, Mo.	1	18	86	20	5	4	3									
St. Paul, Minn.	-	59	50		3	3	2	7								
Wichita, Kans.		u	u	U	U	U	U	U								

\*Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not firefunded.

\*Preumonia and influenza.

\*Bacause of changes in reporting methods in these 3 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

\*Total includes unknown ages.

\*U: Unavailable -: no reported cases

# Meianoma — Continued

increase for melanoma (47.9%) was the highest for all cancers (6). During the same period, the increase in the rate of deaths from melanoma was greater for white males than for other racial and sex groups (Figure 1). In 1992, the rate of deaths from melanoma was 5.9 times higher for whites than for all other races (2.5 and 0.4 per 100,000 population, respectively), and 2.1 times higher for males than females (3.1 and 1.5, respectively).

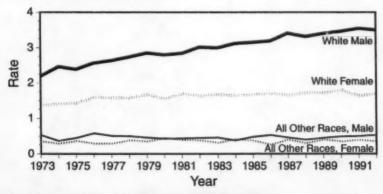
To increase statistical precision, the rate of deaths from melanoma by state was aggregated for 1988–1992. In every state, the rate of deaths from melanoma was substantially higher for whites than for persons of all other races. For whites, the age-adjusted death rate by state ranged from 2.2 to 5.0 per 100,000 population for males and 0.8 to 2.3 for females (Table 1). Most states that are in the two highest death rate quartiles are not in the lower U.S. latitudes where sun exposure is generally more intense (Figure 2).

During 1973–1975 and 1990–1992, death rates were highest for white men aged ≥50 years (Figure 3). The death rate increased more with age for males than for females during 1990–1992.

Reported by: Div of Cancer Prevention and Control, National Center for Chronic Disease Prevention and Health Promotion, CDC.

Editorial Note: The findings in this report indicate that the rate of deaths from melanoma was higher for whites than persons of all other races—a finding consistent with the more common occurrence of melanoma among persons with lightly pigmented skin (2) and an incidence among whites that is more than 10 times higher than that for blacks (1). Based on estimates by the American Cancer Society, during 1995 an estimated 34,100 new cases of melanoma will be diagnosed and 7200 deaths will be caused by melanoma (1). The likelihood of survival of melanoma is substantially greater if the disease is detected early and treated (2). Early detection of thin lesions is associated with improved prognosis and treatment outcome than is detection of thicker, later stage tumors (2).

FIGURE 1. Average annual age-adjusted rate\* of deaths from melanoma, by race and sex — United States, 1973–1992



<sup>\*</sup>Per 100,000 population, adjusted to the 1970 U.S. population.

Melanoma — Continued

TABLE 1. Number and rate\* of deaths from melanoma<sup>†</sup>, by state, race, and sex — United States, 1988-1992

				Rate		
	-		All	All	White	White
State	No.	Total	white	other races	males	females
Alabama	538	2.3	2.8	0.4	3.9	1.9
Alaska	39	2.1	2.5	1	3.2	1.7
Arizona	488	2.3	2.5	0.5	3.4	1.6
Arkansas	325	2.2	2.5	0.7	3.3	1.8
California	3.796	2.5	2.9	0.4	4.0	2.0
Colorado	444	2.6	2.7	1	3.6	2.0
Connecticut	436	2.2	2.3	0.5	2.9	1.9
Delaware	108	2.9	3.4	1	5.0	2.2
District of Columbia	38	1.1	2.4	0.4	4.3	0.8
Florida	2,210	2.4	2.6	0.4	3.9	1.6
Georgia	731	2.2	2.7	0.6	3.8	1.9
Hawaii	71	1.2	3.1	0.5	4.6	1.8
ldaho	133	2.4	2.4	1	3.3	1.7
Illinois	1,241	1.9	2.1	0.3	2.9	1.5
Indiana	662	2.1	2.1	0.3	3.1	1.5
lowa	385	2.1	2.2	0.3	2.9	
Kansas				1	3.5	1.6
	356	2.4	2.5	-		1.7
Kentucky	452	2.1	2.3	0.4	3.1	1.5
Louisiana	378	1.7	2.2	0.3	3.1	1.5
Maine	166	2.2	2.3	4	3.1	1.6
Maryland	565	2.3	2.7	0.4	3.8	1.9
Massachusetts	935	2.6	2.8	1	3.7	2.1
Michigan	902	1.8	2.0	0.3	2.8	1.3
Minnesota	493	2.0	2.1	0.9	2.6	1.6
Mississippi	269	1.8	2.4	0.5	3.6	1.5
Missouri	730	2.4	2.6	0.3	3.5	1.9
Montana	115	2.4	2.5	1	3.0	2.0
Nebraska	212	2.2	2.3	1	3.0	1.7
Nevada	161	2.5	2.6	1	3.3	2.0
New Hampshire	143	2.3	2.3	. 1	3.5	1.5
New Jersey	1,134	2.4	2.7	0.4	3.9	1.8
New Mexico	174	2.2	2.3	1	2.9	1.8
New York	2,169	2.0	2.3	0.4	3.3	1.6
North Carolina	956	2.5	3.1	0.4	4.1	2.3
North Dakote	65	1.5	1.5	1	2.2	1.0
Ohio	1,321	2.1	2.3	0.5	3.2	1.5
Oklahoma	483	2.6	2.9	0.3	3.9	2.1
Oregon	425	2.5	2.6	1	3.4	1.9
Pennsylvania	1,735	2.2	2.4	0.4	3.4	1.7
Rhode Island	1,735	2.1	2.2	1	3.4	1.4
South Carolina					4.1	1.7
South Carolina South Dakota	394	2.1	2.7	0.2		
	85	2.0	2.1		2.8	1.5
Tennessee	662	2.3	2.6	0.5	3.6	1.8
Texas	1,806	2.1	2.3	0.5	3.3	1.6
Utah	213	2.9	3.0	1	4.0	2.0
Vermont	72	2.4	2.4	1	3.7	1.3
Virginia	738	2.2	2.6	0.5	3.5	1.9
Washington	598	2.2	2.3	0.3	3.2	1.7
West Virginia	292	2.5	2.6	1	3.5	1.9
Wisconsin	549	1.9	2.0	1	2.7	1.4
Wyoming	45	1.9	1.9	1	2.6	1.3
Total	31,579	2.2	2.5	0.4	3.4	1.7

<sup>\*</sup>Per 100,000 population, adjusted to the 1970 U.S. population.

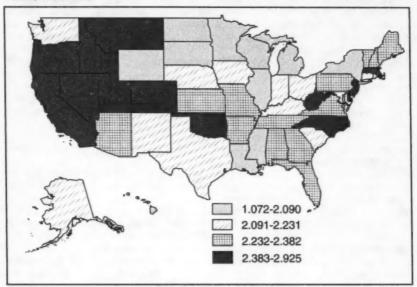
\*International Classification of Diseases, Adapted, Ninth Revision, codes 172.0–172.9.

<sup>&</sup>lt;sup>5</sup>Blacks and other races were combined for this analysis because of their small number of deaths from melanoma and the small population of these groups in some states.

Fewer than 100,000 persons in denominator or fewer than five deaths.

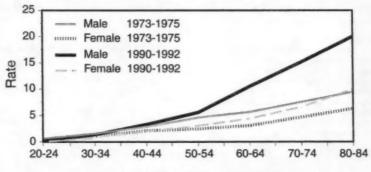
Melanoma — Continued

FIGURE 2. Average annual rate\* of deaths from melanoma, by quartile — United States, 1988–1992



<sup>\*</sup>Per 100,000 population, adjusted to the 1970 U.S. population.

FIGURE 3. Average annual age-specific rate\* of deaths from melanoma among whites, by sex and time period — United States, 1973–1975 and 1990–1992



Age Group (Years) at Death

<sup>\*</sup>Per 100,000 population.

### Malanoma - Continued

Risk factors (2,7,8) for melanoma related to ultraviolet radiation exposure include a history of sunburn or sun sensitivity, a tendency to freckle, the presence of lightly pigmented skin, blue eyes, and blond or red hair. Other risk factors include a family or personal history of melanoma and the presence of a large number of moles or any atypical moles. Sources for exposure to ultraviolet radiation include sunlight and artificial light (e.g., tanning booths), both of which can cause acute sunburn. The increased risk among persons who sustain intermittent, acute sunburn at an early age (i.e., <18 years) underscores the need for initiating prevention measures early in childhood (9).

Adults, particularly older men in whom rates of deaths from melanoma are highest, should be encouraged to perform periodic skin self-examination or be examined by a family member (2) to monitor location, size, and color of a pigmented lesion or mole. The "ABCD approach" can be used to assess pigmented lesions and represents mole asymmetry ("A"), border irregularity ("B"), nonuniform color (i.e., pigmentation) ("C"), and diameter >6 mm ("D") (1,2,8).

Recommendations for preventing melanoma should emphasize reduction of direct exposure to the sun when sunburn is most likely to occur, especially from 10 a.m. to 3 p.m. Specific measures include wearing a broad-brimmed hat and clothes that protect sun-exposed areas, seeking shade when outdoors, using a sunscreen of sun protection factor ≥15 that provides protection against ultraviolet radiation A and ultraviolet radiation B, and referring to the daily Ultraviolet Index\* rating provided by the National Weather Service and others when planning outdoor activities.

In 1994, CDC implemented a program to assist in achievement of the national health objectives for the year 2000 for preventing skin cancer (10). Elements of the CDC program include funding support for state health departments to develop and implement prevention projects aimed at parents and caregivers of young children; enhancing prevention messages for the public; initiating the development of school health curriculum guidelines; enhancing Ultraviolet Index public health messages; and developing a public and professional education plan for skin cancer prevention.

May is Melanoma/Skin Cancer Detection and Prevention Month. Additional information is available from the American Academy of Dermatology, 930 North Meacham Road, Schaumburg, IL 60173-4965.

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<sup>\*</sup>The Ultraviolet Index, provided by the National Weather Service, is broadcast by television and print media in 58 U.S. cities and provides information on the intensity of the sun's rays during the solar noon hour. The index ranges from 0 to 10+ with ≥10 indicating the most intense sunlight.

### Melanoma — Continued

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# Reptile-Associated Salmonellosis — Selected States, 1994-1995

During 1994–1995, health departments in 13 states reported to CDC persons infected with unusual *Salmonella* serotypes in which the patients had direct or indirect contact with reptiles (i.e., lizards, snakes, or turtles). In many of those cases, the same serotype of *Salmonella* was isolated from patients and from reptiles with which they had had contact or a common contact. For some cases, infection resulted in invasive illness, such as sepsis and meningitis. This report summarizes clinical and epidemiologic information for six of these cases.

Connecticut. During January 1995, a 40-year-old man was hospitalized because of an acute illness characterized by constipation, lower back pain, chills, and fever. He reported having taken ranitidine and an antacid for symptoms of heartburn before onset of mild diarrhea 3 days before hospitalization. A blood culture yielded Salmonella serotype Wassenaar. A magnetic resonance image scan of the right sacrum suggested osteomyelitis. Ciprofloxacin therapy was initiated for presumed Salmonella osteomyelitis, and he was discharged after 14 days. All household contacts were asymptomatic. The family had purchased two iguanas (Iguana iguana) in October 1994; although the patient denied directly handling the iguanas, he reported having recently cleaned their aquarium. Stool samples obtained from both iguanas yielded Salmonella Wassenaar.

New Jersey. During September 1994, a 5-month-old girl was hospitalized because of an acute illness including vomiting, lethargy, and fever; on admission, she had a bulging fontanelle and stiff neck. Blood cultures and cerebrospinal fluid yielded Salmonella serotype Rubislaw. She was treated with intravenous ceftazidime for Salmonella sepsis and meningitis and discharged from the hospital after 10 days. Other members of the family were asymptomatic. The infant routinely was fed infant formula. Although the family did not own a reptile, the infant frequently stayed at a babysitter's house where an iguana was kept. Culture of a stool sample from the iguana yielded Salmonella Rubislaw. The infant was reported to have not touched the iguana; however, the iguana frequently was handled by the babysitter and other members of the babysitter's family. All members of the babysitter's family were asymptomatic, but stool cultures from two members, including a child who had frequently played with and fed the infant, yielded Salmonella Rubislaw.

Salmonellosis - Continued

New York. In December 1994, a 45-year-old man infected with human immunodeficiency virus was hospitalized because of weakness, nausea, vomiting, and diarrhea. His CD4+ T-lymphocyte count was <50 cells/μL. Cultures from blood and sputum samples yielded Salmonella serotype Illa 41:z4z23:- (S. subspecies Arizonae). He owned corn snakes and, until shortly before onset of illness, had worked at a pet store where he handled reptiles frequently. Salmonella sepsis was diagnosed, and he was treated with oral ciprofloxacin.

North Carolina. During December 1994, a 2-day-old boy born 8 weeks prematurely developed respiratory difficulties, had pneumothorax diagnosed, and was transferred to a referral hospital. Blood obtained at birth for culture had been negative, but a culture of blood obtained 9 days later because of an elevated white blood cell count yielded Salmonella serotype Kintambo. He was treated with intravenous ampicillin for Salmonella sepsis and was discharged from the hospital after 30 days. Eleven days after the positive culture was collected, Salmonella Kintambo was cultured from a blood sample obtained from a 12-day-old acutely ill boy who was born at 28 weeks' gestation and had shared a room at the referral hospital with the first infant. The second infant was treated with intravenous cefotaxime for Salmonella sepsis and was discharged after 44 days. Both infants had been in the hospital continuously from birth until onset of illness. The mother of the first infant reported having had a diarrheal illness 4 days before the birth of the infant; she frequently handled a savanna monitor lizard (Varanus exanthemapicus) that the family had purchased in September 1994 and kept in a cage in the kitchen. Culture of a stool sample from the lizard yielded Salmonella Kintambo. The second family did not own a reptile.

Ohio. During January 1994, a 6-week-old boy was hospitalized because of diarrhea, stiff neck, and fever; culture of samples of blood and cerebrospinal fluid yielded Salmonella serotype Stanley. The infant was treated with intravenous cefotaxime for Salmonella sepsis and meningitis and discharged from the hospital after 56 days. He had been fed only formula and had not attended a child-care facility; household contacts were asymptomatic. The family had purchased a 4-inch water turtle in April 1993. A culture of stool from the turtle yielded Salmonella Stanley. Although the infant had not had contact with the turtle, other family members had had direct contact, and the turtle's food and water bowls were washed in the kitchen sink.

Pennsylvania. During October 1994, a 21-day-old girl was hospitalized because of an illness including vomiting, bloody diarrhea, and fever. She received empirical treatment with intravenous ampicillin. A culture of stool yielded Salmonella serotype Poona; she was discharged from the hospital after 11 days. Other members of the family were asymptomatic. The infant had been fed infant formula and had not attended a child-care center. The family owned an iguana, and culture of a stool sample from the iguana yielded Salmonella Poona. Although the infant did not have contact with the iguana, the iguana was handled frequently by her mother and other members of the family.

Additional investigations. In addition to the six states in this report, seven other states (California, Colorado, Florida, Illinois, Minnesota, Oregon, and Utah) have reported recent isolation of the same Salmonella serotype from samples obtained from patients and reptiles with which they had been in contact or associated. Several of these states issued press releases about the risk for acquiring salmonellosis from reptiles. In addition, some states have issued health alerts to pet stores to warn owners

Salmonellosis - Continued

and prospective owners about the risks for salmonellosis associated with contact with reptiles and to provide instructions about proper handling of reptiles; store owners have been asked to post the alert and provide copies to all persons purchasing a reptile.

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Editorial Note: For most of the cases described in this report, the identification of rare Salmonella serotypes in persons who had no other apparent exposures was linked to direct or indirect contact with a pet reptile from which the same serotype was isolated. In addition, these cases are consistent with previous reports indicating that direct contact with a reptile is not necessary for transmission of Salmonella (1,2). This report also illustrates the severe complications of Salmonella infection that can occur in young children, immunocompromised persons, and infants during the peripartum period.

Reptiles are popular as pets in the United States: an estimated 7.3 million pet reptiles are owned by approximately 3% of households (G. Mitchell, Pet Industry Joint Advisory Council, personal communication, 1995). Because the most popular reptiles species will not breed if closely confined, most reptiles are captured in the wild and imported. The number of reptiles imported into the United States has increased dramatically since 1986 and primarily reflects importation of iguanas (27,806 in 1986 to 798,405 in 1993) (M. Albert, Fish and Wildlife Service, U.S. Department of the Interior, personal communication, June, 1994).

A high proportion of reptiles are asymptomatic carriers of Salmonella. Fecal carriage rates can be more than 90% (3); attempts to eliminate Salmonella carriage in reptiles with antibiotics have been unsuccessful and have led to increased antibiotic resistance (1,4). A wide variety of Salmonella serotypes has been isolated from reptiles, including many that rarely are isolated from other animals (reptile-associated serotypes). Reptiles can become infected through transovarial transmission or direct contact with other infected reptiles or contaminated reptile feces. High rates of fecal carriage of Salmonella can be related to the eating of feces by hatchlings—a typical behavior for iguanas and other lizards—which can establish normal intestinal flora for hindgut fermentation (5).

During the early 1970s, small pet turtles were an important source of Salmonella infection in the United States; an estimated 4% of families owned turtles, and 14% of salmonellosis cases were attributed to exposure to turtles (6). In 1975, the Food and

### Salmonellosis - Continued

Drug Administration prohibited the distribution and sale of turtles with a carapace <4 inches; many states prohibited the sale of such turtles. These measures resulted in the prevention of an estimated 100,000 cases of salmonellosis annually (6). However, since 1986, the popularity of iguanas and other reptiles that can transmit infection to humans has been paralleled by an increased incidence of Salmonella infections caused by reptile-associated serotypes (7).

Because young children are at increased risk for reptile-associated salmonellosis and severe complications (e.g., septicemia and meningitis) (7-9), reducing exposure of infants or children aged <5 years to reptiles is particularly important. The risks for transmission of Salmonella from reptiles to humans can be reduced by avoiding direct and indirect contact with reptiles (see box).

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# Recommendations for Preventing Transmission of Salmonella From Reptiles to Humans

- Persons at increased risk for infection or serious complications of salmonellosis (e.g., pregnant women, children aged <5 years, and immunocompromised persons such as persons with AIDS) should avoid contact with reptiles.</li>
- Reptiles should not be kept in child-care centers and may not be appropriate pets in households in which persons at increased risk for infection reside.
- Veterinarians and pet store owners should provide information to potential purchasers and owners of reptiles about the increased risk of acquiring salmonellosis from reptiles.
- Veterinarians and operators of pet stores should advise reptile owners always to wash their hands after handling reptiles and reptile cages.
- To prevent contamination of food-preparation areas (e.g., kitchens) and other selected sites, reptiles should be kept out of these areas—in particular, kitchen sinks should not be used to bathe reptiles or to wash reptile dishes, cages, or aquariums.

# **Monthly Immunization Table**

To track progress toward achieving the goals of the Childhood Immunization Initiative (CII), CDC publishes monthly a tabular summary of the number of cases of all diseases preventable by routine childhood vaccination reported during the previous month and year-to-date (provisional data). In addition, the table compares provisional data with final data for the previous year and highlights the number of reported cases among children aged <5 years, who are the primary focus of CII. Data in the table are derived from CDC's National Notifiable Diseases Surveillance System.

# Number of reported cases of diseases preventable by routine childhood vaccination — United States, March 1995 and 1994–1995\*

	No. cases, March	Total o		No. case children age January	
Disease	1995	1994	1995	1994	1995
Congenital rubella syndrome	0	2	2	2	2
Diphtheria	0	1	0	1	0
Haemophilus influenzae <sup>§</sup>	108	291	337	89	78
Hepatitis B1	782	2,743	1,873	44	11
Measles	111	108	143	25	54
Mumps	80	334	176	38	34
Pertussis	271	923	672	533	332
Poliomyelitis, paralytic**	0	0	0	0	0
Rubella	6	89	17	7	5
Tetanus	4	8	6	0	0

<sup>\*</sup>Data for 1994 and 1995 are provisional.

<sup>&</sup>lt;sup>†</sup>For 1994 and 1995, age data were available for ≥87% cases.

<sup>&</sup>lt;sup>5</sup>Invasive disease; *H. influenzae* serotype is not routinely reported to the National Notifiable Diseases Surveillance System. Of 78 cases among children aged <5 years, serotype was reported for 17 cases, and of those, 10 were type b, the only serotype of *H. influenzae* preventable by vaccination.

Because most hepatitis B virus infections among infants and children aged <5 years are asymptomatic (although likely to become chronic), acute disease surveillance does not reflect the incidence of this problem in this age group or the effectiveness of hepatitis B vaccination in infants.

<sup>\*\*</sup>One case with onset in 1994 has been confirmed; this case was vaccine-associated. An additional six suspected cases are under investigation. In 1993, three of 10 suspected cases were confirmed; two of the confirmed cases for 1993 were vaccine-associated, and one was imported. The imported case occurred in a 2-year-old Nigerian child brought to the United States for care of his paralytic illness; no poliovirus was isolated from the child.

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